

1. Calculate fingerprints

- ▲ 1011011...
- 1100010...
- 1010001...
- 1110110...
- 1011001...
- ▲ 1011111...
- 0100010...
- ▲ 1001111...
- 1010000...

2. Tanimoto similarity matrix

threshold = .7

	▲	●	■	●	■	▲	●	▲	■
▲		.3	.7	.4	.7	.9	.2	.5	.7
●			.2	.8	.4	.6	.9	.7	.7
■				.4	.9	.7	.2	.6	.9
●					.5	.6	.9	.7	.6
■						.7	.3	.7	.8
▲							.4	.9	.6
●								.5	.2
▲									.7

⇒ sort molecules by #neighbors (molecules with similarity ≥ .7)

#neighbors		#neighbors
4	▲	■
4	●	▲
4	■	■
3	●	●
5	■	▲
4	▲	■
2	●	▲
5	▲	●
5	■	●

sort ⇒

3. Clustering

Flag cluster members, start from top of the list:

1. Iteration: molecule ■

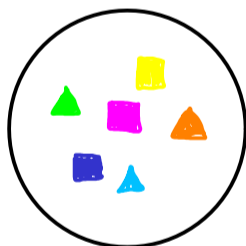
Neighbors:

	▲	●	■	●	■	▲	●	▲	■
▲		.3	.7	.4	.7	.9	.2	.5	.7
●			.2	.8	.4	.6	.9	.7	.7
■				.4	.9	.7	.2	.6	.9
●					.5	.6	.9	.7	.6
■						.7	.3	.7	.8
▲							.4	.9	.6
●								.5	.2
▲									.7

Flag neighbors (and centroid):

	▲	●	■	●	■	▲	●	▲	■
▲		.3	.7	.4	.7	.9	.2	.5	.7
●			.2	.8	.4	.6	.9	.7	.7
■				.4	.9	.7	.2	.6	.9
●					.5	.6	.9	.7	.6
■						.7	.3	.7	.8
▲							.4	.9	.6
●								.5	.2
▲									.7

Build new cluster:



2. Iteration: molecule ●

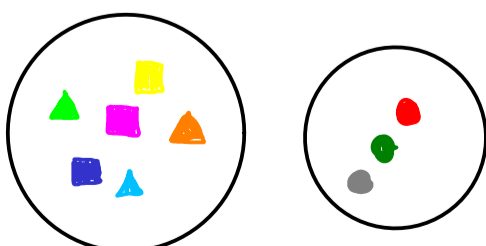
Neighbors:

	▲	●	■	●	■	▲	●	▲	■
▲		.3	.7	.4	.7	.9	.2	.5	.7
●			.2	.8	.4	.6	.9	.7	.7
■				.4	.9	.7	.2	.6	.9
●					.5	.6	.9	.7	.6
■						.7	.3	.7	.8
▲							.4	.9	.6
●								.5	.2
▲									.7

Flag neighbors (and centroid):

	▲	●	■	●	■	▲	●	▲	■
▲		.3	.7	.4	.7	.9	.2	.5	.7
●			.2	.8	.4	.6	.9	.7	.7
■				.4	.9	.7	.2	.6	.9
●					.5	.6	.9	.7	.6
■						.7	.3	.7	.8
▲							.4	.9	.6
●								.5	.2
▲									.7

Build new cluster:



3. Iteration → Termination, each molecule is part of a cluster.